EXHIBIT 13

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

FRANKLIN BUONO, *Plaintiff,* v. POSEIDON AIR SYSTEMS, VICTORY AUTO STORE, INC., VICTORY AUTO STORES, INC. d/b/a POSEIDON AIR SYSTEMS, WORTHINGTON INDUSTRIES, INC., AND TYCO FIRE PRODUCTS LP, *Defendants.*	Civil Action No. 1:17-cv-05915 (PMH)
TYCO FIRE PRODUCTS LP, *Third-Party Plaintiff,* v. OPRANDY'S FIRE & SAFETY INC., *Third-Party Defendant.*	**DECLARATION OF ZDENEK HEJZLAR**

I, Zdenek Hejzlar, hereby declare as follows:

1. My employer Engineering Systems, Inc. ("ESI"), was retained by counsel for Tyco Fire Products, LP, to conduct an investigation with respect to the occupational and systems safety issues related to the rupture of the fire suppression test tank that occurred on February 12, 2016, at Oprandy's Fire and Safety Equipment, Inc., in Middletown, New York.

2. In connection with ESI's investigation, I provided a report entitled "Preliminary Investigative Report: Buono v. Tyco Fire, et al." on April 16, 2020. A true and correct copy of my report is attached hereto as Exhibit A.

3. The contents of this report are true and correct to the best of my knowledge and belief.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Executed on this 1 day of February, 2021, at Fort Myers FL

Zdenek Hejzlar

EXHIBIT A

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

FRANKLIN BUONO, *Plaintiff,* v. POSEIDON AIR SYSTEMS, VICTORY AUTO STORE, INC., VICTORY AUTO STORES, INC. d/b/a POSEIDON AIR SYSTEMS, WORTHINGTON INDUSTRIES, INC., AND TYCO FIRE PRODUCTS LP, *Defendants.*	Civil Action No. 1:17-cv-05915 (NSR) (LMS) **EXPERT REPORT OF ZDENEK HEJZLAR**
TYCO FIRE PRODUCTS LP, *Third-Party Plaintiff,* v. OPRANDY'S FIRE & SAFETY INC., *Third-Party Defendant.*	

Preliminary Investigative Report

Buono v Tyco Fire, et al.

ESi Project #: 63235F

12750 Commonwealth Drive
Ft. Myers, FL 33913

Preliminary Investigative Report

Buono v Tyco Fire, et al.

ESi Project #: 63235F

Report Prepared For:

Williams & Connolly LLP
725 Twelfth Street, N.W.
Washington, DC 20005

Report Submitted by:

Zdenek Hejzlar, Ph.D., CSP
Senior Managing Consultant

Buono v Tyco Fire, et al.
Preliminary Investigative Report
April 17, 2020

Executive Summary

ESI was asked to conduct investigation based on the materials provided with respect to occupational and systems safety of February 12th, 2016, industrial air test tank explosion incident at Oprandy's Fire & Safety Equipment in Middletown, New York, in which two employees, including Mr. Franklin Buono, were injured. In the incident the low-pressure (low risk) air cylinder (225 psi working pressure) used for testing of kitchen fire suppression systems was being filled from a high-pressure (high risk) Poseidon air cylinder system (6000 psi working pressure). The Poseidon system was designed and intended for filling self-contained breathing apparatus (SCBA) high-pressure tanks for fire fighters to use as a supply of breathing air when fighting fires with limited oxygen or potentially hazardous atmosphere such as smoke-filled rooms. The improper and hazardous mixing of low-pressure and high-pressure systems designed for entirely different industrial applications without appropriate safety devices, guards, procedures, training and facility warning signs exposed the employees to extreme hazards. Under the general duty clause, the employer had the duty to provide a reasonably safe workplace to its employees. To do that, the employer had the duty to analyze operations to identify hazards, eliminate and/or guard against those hazards. The employer had the duty to warn and train employees how to avoid recognized hazards consistent with the well-established and nationally accepted safety hierarchy of controls. The investigation revealed that if an appropriately low-pressure system air supply system (such as an relatively inexpensive low-pressure air compressor) was used to fill the low-pressure cylinder instead of the high-pressure hazardous Poseidon system the cylinder would never have reached the burst pressure even without the missing safety devices, guards, inadequate procedures, inappropriate training and hazardous practices.

Introduction

Per client's request, Engineering Systems Inc. (ESi) established a project file associated with a February 12th, 2016, industrial air test tank explosion incident at Oprandy's Fire & Safety Equipment in Middletown, New York, in which two employees including Mr. Franklin Buono were injured.

Background

I, Zdenek Hejzlar, a Senior Managing Consultant with ESi, was asked to review and conduct a preliminary investigation based on the materials provided with respect to occupational and systems safety. ESi was provided with the file materials listed in *Attachment A*. In addition to the

materials listed in *Attachment A*, a number of literature and research references were also relied upon. They are provided in *Attachment B*.

In rendering these opinions, which are stated based on a reasonable degree of scientific probability, I rely on my education, training and experience, and my investigation into the incident. With respect to this particular project, I have over 30 years of experience in the occupational health and safety fields. Since 1995 I have been a Certified Safety Professional (CSP) with specialty certification in engineering aspects of safety. CSP is an internationally recognized certification in safety administered by the Board of Certified Safety Professionals (BCSP). I am an active member of the ASTM Committee E34 on Occupational Health and Safety that develops standards and publications related to industrial safety. I chaired the ASTM Committee on Publications that oversaw the technical publication and peer review of ASTM technical journals and technical manuals including peer reviewed publications in occupational safety. From 1982 to 1984, I owned and operated a marina campground and restaurant complex and worked on commercial diving projects and harvested oysters as commercial diver using Self Contained Underwater Breathing Apparatus (SCUBA) air systems that are similar pressure systems to Self Contained Breathing Apparatus (SCBA). I have experience in laboratories and industrial plant pressurized gas and air systems including acetylene welding and cutting systems.

My curriculum vitae, testimony list and ESi Fee and Charge Schedule are included in *Attachment C.*

Investigation and Analysis

The investigative approach utilized in this project was based on American Society of Testing and Materials International (ASTM) standards. ASTM is an industry consensus safety standards organization that is over 100 years old and recognized nationally and internationally as industry standards setting organization. ASTM E678 Standard Practice for Evaluation of Scientific or Technical Data is intended for persons engaged in forensic investigations that are responsible for identifying significant data. Such persons analyze and correlate the data and report conclusions and opinions. These opinions should be supported by the data and factual information, reported in a form that is understandable to a layman familiar with the incident, and capable of being evaluated by knowledgeable scientists, engineers, or investigators. ASTM E620-18 Standard Practice for Reporting Opinions of Scientific or Technical Experts was also utilized in the investigative approach. This ASTM practice covers the scope of information to be contained in formal written technical reports which express the opinions of the scientific or technical expert with respect to the study of items that are or may reasonably be expected to be the subject of criminal or civil litigation.

The Low-Pressure Air Cylinder Filling Process

Based on the information reviewed to date, at the time of the incident, two Oprandy's employees, Mr. Chris Foust and Mr. Franklin Buono, were attempting to fill a low-pressure cylinder that is used for testing kitchen fire suppression systems. The pressure required in the test tank has only to be sufficient to fill the component piping and to fill air balloons at the nozzle location to demonstrate that there is no blockage in the system. The "balloon test" demonstrates that when

the system is actually charged with the fire extinguishing chemical, the chemical can flow in case of fire. Considering that the average person is able to inflate a balloon by blowing into it, this process clearly does not call for a high-pressure system. At the time of the incident the employees were in process of filling the test tank cylinder with air from high-pressure tanks of the Poseidon cascade system at up to 5,000 psi. The test tank was over pressurized and exploded, causing injuries to both employees.

The working pressure of the test tank stamped on the tank was 225 psi. The pressure required to burst the tank according to OSHA investigation was 1100 to 1200 psi. The pressure to burst the tank came from the Poseidon cascade system that was capable of holding 5,000 psi pressure. A simple way to eliminate the hazard of over-pressurization is to use math and logic to design the hazard out of the system. Operating pressure for the test tank and agent tank is 225 psi. The extinguisher tank recharging instruction state not to overcharge by more than 25 psi. Mr. Brian Scott (owner of Oprandy's) was aware of that requirement for recharging fire extinguishers. To accomplish the refiling operation in a safe manner without introducing potential hazard would amount to using supply pressure no higher that 250 psi. A safe and obvious way to design the process is to select an air supply capable of no more than 250 psi. The higher the supply pressure, the higher the hazard of over pressurizing the cylinder and exposing the employees to the explosion hazards including sharp fragments of the tank flying unrestrained and cutting into limbs of unprotected employees. Mr. Scott selected an air supply designed for entirely different industrial application and capable of 5,000 psi, 20 times higher than the operating pressure of the test tank. His decisions turned the filling procedure into a highly hazardous operation. From a systems-safety perspective, there would be no reason for a product manufacturer to foresee that its 225 psi-rated tank would be refilled using a system capable of producing 5,000 psi of pressure.

Practices at Oprandy's

Mr. Brian Scott is the owner of Oprandy's Fire & Safety Equipment (Oprandy's) and his deposition testimony contains a number of relevant statements that are significant to the analysis of the Oprandy's systems safety and form the basis for the analysis of this incident.

Mr. Scott testified that he had his own air tank filling procedure and he trained Chris Foust utilizing this procedure. He did not show any operation guides or manuals for the Poseidon Cascade system or the fire extinguishing systems to either Mr. Foust or Mr. Buono.

On page 26 of his deposition, Mr. Scott testified that he had been certified in his industry every three years since 1992. He testified that he is certified to comply with OSHA and NFPA requirements. He testified that he has been a Heiser ProTex distributor since 1995, and that he is also a Pyro-chem dealer (though he did not produce documentation showing either of these), but he has not been trained by Tyco. Mr. Scott appears to have sufficient knowledge in his industry such that he should be familiar with regulations and occupational hazards of performing various operational tasks related to filling of the test tanks, maintenance and service of extinguishers, kitchen extinguishing systems, low-pressure hydrotesting and SCBA inspection and refilling. He appeared to have the knowledge to identify hazards mixing components of high- and low-pressure systems.

On page 31 of his deposition, Mr. Scott testified that he bought the Poseidon system used from Howells Fire District in New York in 2000. The fire district had bought it new in 1989. He has no records from the purchase of the Poseidon system. Poseidon is a high-pressure system and thus Poseidon supplies explosion-proof enclosures. Poseidon's explosion-proof enclosure provides increased safety, only operating when the door is closed. It is designed to contain the destructive force of accidental cylinder rupture or hose failure, while allowing the air blast to be vented quickly and in a direction away from the operator. The Poseidon system that Mr. Scott had in his shop included two tank enclosures that, if used, would significantly reduce the risk of any explosion hazard during refilling.

On page 33 of his deposition, Mr. Scott testified that the subject tank was being filled from the Poseidon cascade tank system. He testified that he also used the Poseidon system to fill SCBA bottles. Chris Foust, who he trained, also used the Poseidon system to fill SCBA bottles. On page 38 of his deposition, Mr. Scott testified that he never calibrated the regulator on the Poseidon system. Regulator calibration is important, because the regulator can go out of calibration from age and use and the pressure in the system could differ from the reading displayed on the pressure gauge.

On page 43 of his deposition, Mr. Scott testified that Frank Buono never recharged any kind of tanks.

On page 57 of his deposition, Mr. Scott testified that in 1998 his brother wrote an employee handbook that was periodically updated.

Training

At the time of the incident, Mr. Buono had been employed with Oprandy's for 18 days (Buono p 62). He was working under Mr. Foust, getting to know types, sizes, classification and procedures for low-pressure testing, and/or recharging. On occasion, Mr. Scott was present at Oprandy's but never trained Mr. Buono (Scott 72). Mr. Scott said he had a particular technique, but that Chris had his own technique on how to fill tanks (Scott p. 73). From an occupational-safety perspective, it is generally unsafe for individuals to have different procedures for completing a single work task. Written procedures are thus important to ensuring that employees uniformly use best practices and avoid unsafe acts. Written procedures can also be reviewed and used in identifying potential hazards. Mr. Scott, with his years of experience, filled the tanks his way, yet Mr. Foust, who was not certified and did not have the breadth of Mr. Scott's experience, filled the tanks differently. This shows that there were not uniform training or tank-filling procedures at Oprandy's.

Training at Oprandy's can be classified as "on the job training." There were no written instructions/procedures, no review of manuals, no task-safety analysis, no hazard analysis, no facility signs or warnings for recognized hazards. In this type of on the job training, the trainees are more likely to follow instructions and approach of the trainer and ignore other instructions and warnings, particularly when they do not have access to them. That is, when employees are taught to follow the cues of other employees, those employees are unlikely to seek out training and guidance from other sources. This is dangerous, because the trainer may not have considered or evaluated particular hazards and how to avoid them and these inappropriate and unsafe habits are then transferred to the trainee.

Subject Test Tank

On page 44 of his deposition, Mr. Scott testified that the subject tank was manufactured by Worthington for Pyro Chem distributors to be an air test tank, containing no labeling, no markings, no siphon tube in the valve assembly and the tank was green on the top and red on the bottom. In 2014, Mr. Scott reportedly purchased Catskill Fire Systems from his friend, Richard Dillon, who was a Pyro Chem distributor and purchased the tank from Pyro Chem to use as a test tank. The subject cylinder was manufactured in 1998. Mr. Scott does not have any paperwork on the test tank. He did not have a documented procedure, listing the steps for filling the tank with compressed air.

The subject test tank is an industrial cylinder manufactured to meet the DOT standards. It is not a consumer product and is intended for professional use only. The tank can be fitted with a variety of valves depending on the end user's needs. A number of tank manufacturers offer tanks for various applications. The tanks are sold without any labels and or warnings and it is up to the end user to determine how the tank is to be used, then evaluate hazards of such application and utilize applicable hazard abatement measures for such application. The reference list in *Attachment B* to this report includes examples of tanks being offered by Matheson. Mr. Scott purchased the tank as part of the business inventory when he purchased Catskill Fire Systems. The tank was equipped with a valve. *Figure 1* is a photograph from the OSHA investigation that shows the valve on top of the tank.

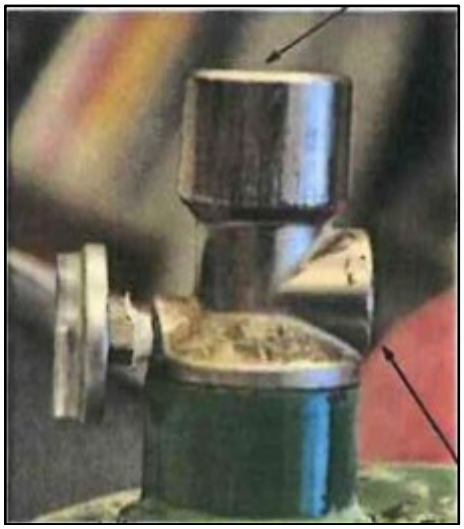

Figure 1. Photograph from the OSHA investigation depicting the subject valve on the subject tank.

Test Tank Cylinder Filling System

The pressure in the Poseidon cascade system was regulated with a high-pressure regulator, as described by Mr. Scott and supported by evidence from the OSHA investigation and available site photographs. On page 100 of his deposition, Mr. Scott testified that both the nitrogen tank for recharging extinguishers and the Poseidon cascade systems were two-stage regulators.

Figure 2. The gauge on the Poseidon Cascade tank system regulator.

The portion of the filling system put together by Mr. Scott (hoses, connectors and the ball valve shown in *Figure 3*), did not incorporate over pressure protection or a pressure gauge to monitor the pressure between the ball valve and the test tank. There is a gauge on the valve assembly of the test tank, but this gauge can become compromised. Pyro-Chem instruction in the Technical Manual for the Kitchen Knight II Restaurant Fire Suppression System has a note specifically warning against the way this tank was charged with air. It states, "The pressure gauge attached to the tank valve should not be used to determine when the charging pressure has been reached. A calibrated external gauge must be used." This is a common practice in the industry that utilizes compressed air or other compressed gasses. As an industry example, under NFPA 10 section 7.7.4.5.2, "A regulated source of pressure set no higher than 25 psi above the operating (service) pressure shall be used to fill fire extinguishers. 7.7.4,5.3 requires a "The gauge used to set the regulated source of pressure shall be calibrated at least annually. Mr. Scott testified that he never calibrated the regulator on the Poseidon system. Although Mr. Scott stated that none of the instructions and regulations applied to the test tank cylinder filling, he testified that he used the

same ball valve set up for filling extinguisher tanks with nitrogen. He did not have a gauge or pressure release valve on that system either. The over pressure hazard is the same whether filling the subject test tank cylinder, old Pyro-Chem cylinder used as a test tank or recharging a fire extinguisher. The OSHA report stated that even if the tank involved has been designated for testing or training purposes only, the same hazards exist and the same safety requirements apply.

Under the OSHA general duty clause, Mr. Scott had the obligation to identify these hazards and protect his employees from such hazards. Besides the test tank that failed, Mr. Scott testified that he used other low-pressure, old extinguisher tanks as test tanks for the balloon tests (Scott p.161 and 162). The over pressurization hazard is the same regardless of which tank he used, and the employees needed to be protected from those hazards.

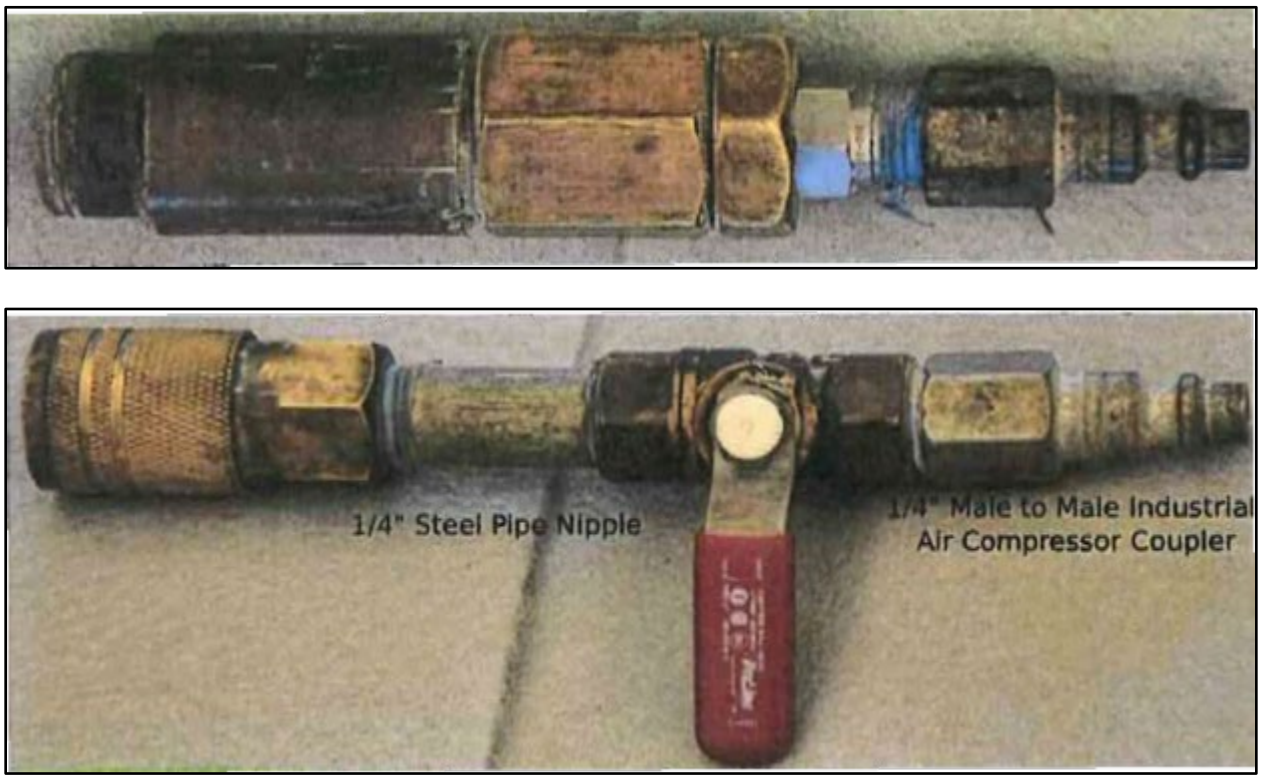

Figure 3. Photos from OSHA investigation that show the components of the test tank filling system. The upper figure fitting on the right was attached to the test tank, the male coupler in the upper photo would connect to the female coupler of the bottom figure and the mail coupler on the right in the bottom figure would connect to the air supply hose.

A safe means to reduce cylinder pressure to a workable level for operating equipment and instruments is through a pressure reduction regulator. Single-stage gas pressure regulators reduce cylinder pressure to delivery or outlet pressure in one step. Two-stage gas pressure regulators reduce cylinder pressure in two steps. Since the performance of each regulator is influenced by mechanical characteristics, the choice depends on the requirements of the application. Examples of single stage and two-stage regulators including diagrams showing the principles of operation are depicted in *Figures 4* and *5*. They are typically attached to the high pressure tank or high-pressure supply and come with two gauges. The inlet pressure gauge and

the outlet pressure gauge. The setting that Mr. Scott testified to is actually the outlet pressure by the regulator (either single or two stage).

In a single stage regulator high pressure gas from the supply enters into the regulator through the inlet valve. The gas then enters the body of the regulator, which is controlled by the needle valve. The pressure rises, which pushes the diaphragm, closing the inlet valve to which it is attached, and preventing any more gas from entering the regulator. The outlet pressure and the inlet pressure hold the diaphragm/poppet assembly in the closed position against the force of the large spring. If the supply pressure falls, it is as if the large spring compression is increased allowing more gas and higher pressure to build in the outlet chamber until an equilibrium pressure is reached. Thus, if the supply pressure falls, the outlet pressure will increase, provided the outlet pressure remains below the falling supply pressure. This is the cause of end-of-tank dump where the supply is provided by a pressurized gas tank. With a single stage regulator, when the supply tank gets low, the lower inlet pressure causes the outlet pressure to climb. If the spring compression is not adjusted to compensate, the poppet can remain open and allow the tank to rapidly dump its remaining contents. In other words, the lower the supply pressure, the lower the pressure differential the regulator can achieve for a given spring setting. The outlet side is fitted with a pressure gauge. As gas is drawn from the outlet side, the pressure inside the regulator body falls. The diaphragm is pushed back by the spring and the valve opens, letting more gas in from the supply until equilibrium is reached between the outlet pressure and the spring. The outlet pressure therefore depends on the spring force, which can be adjusted by means of an adjustment handle or screw.

Two stage regulators are two single stage regulators in one that operate to reduce the pressure progressively in two stages instead of one. The first stage, which is preset, reduces the pressure of the supply gas to an intermediate stage; gas at that pressure passes into the second stage. The gas now emerges at a pressure (working pressure) set by the pressure adjusting control knob attached to the diaphragm. Two stage regulators have two safety valves, so that if there is any excess pressure there will be no explosion. A major objection to the single stage regulator is the need for frequent adjustment. If the supply pressure falls, the outlet pressure may change, necessitating adjustment. In the two stage regulator, there is improved compensation for any drop in the supply pressure. The first stage, which is typically nonadjustable and preset by the factory (typically around 500 psi; see two stage regulators information references that are included in *Attachment B*), and the second stage which is adjustable up to the maximum of the preset pressure of the first stage. Thus, if the high-pressure nitrogen tank system has a typical two-stage regulator with the 500 psi preset, a tank cannot be pressurized to more than 500 psi, which was significantly below the burst pressure of the test tank (based on OSHA conclusion of the required burst pressure of 1100 to 1200 psi). While the nitrogen refilling may not have posed a burst pressure hazard of the test tank, the same cannot be said for the Poseidon cascade air system.

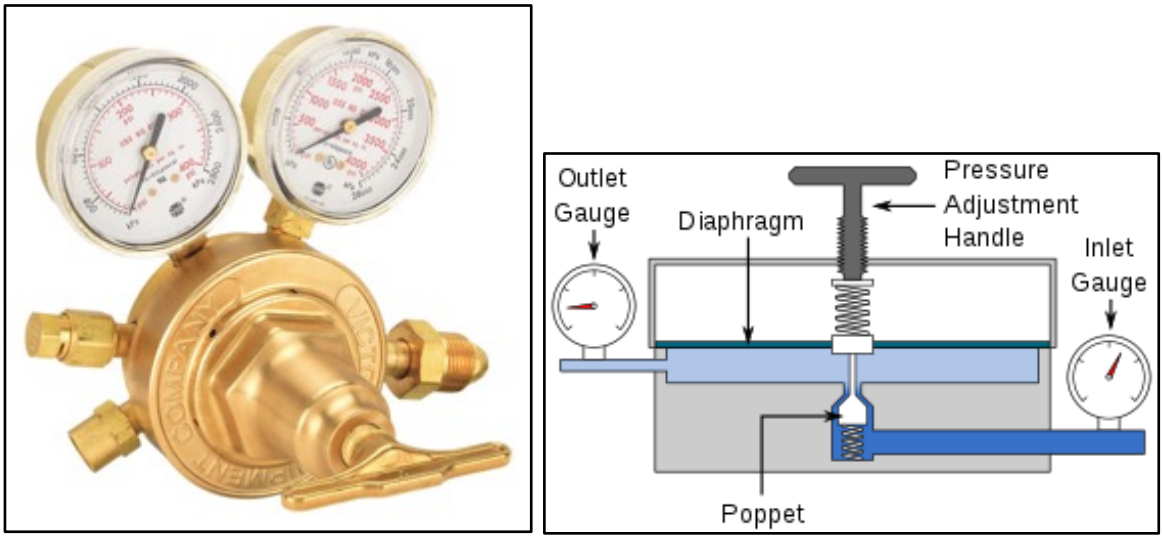

Figure 4. An example of a single stage - Professional SR450E-580 Series, Gas Regulator, Single Stage, General Purpose, 10 to 200 psi on the left and principle of operation on the right.

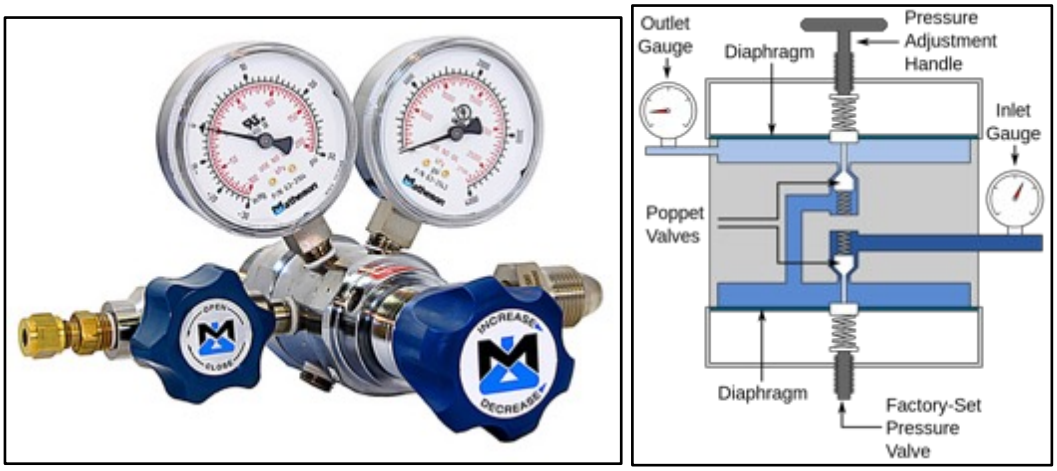

Figure 5. An example of Matheson 3120A Series Dual-Stage High-Purity Regulator and principle of operation on the right.

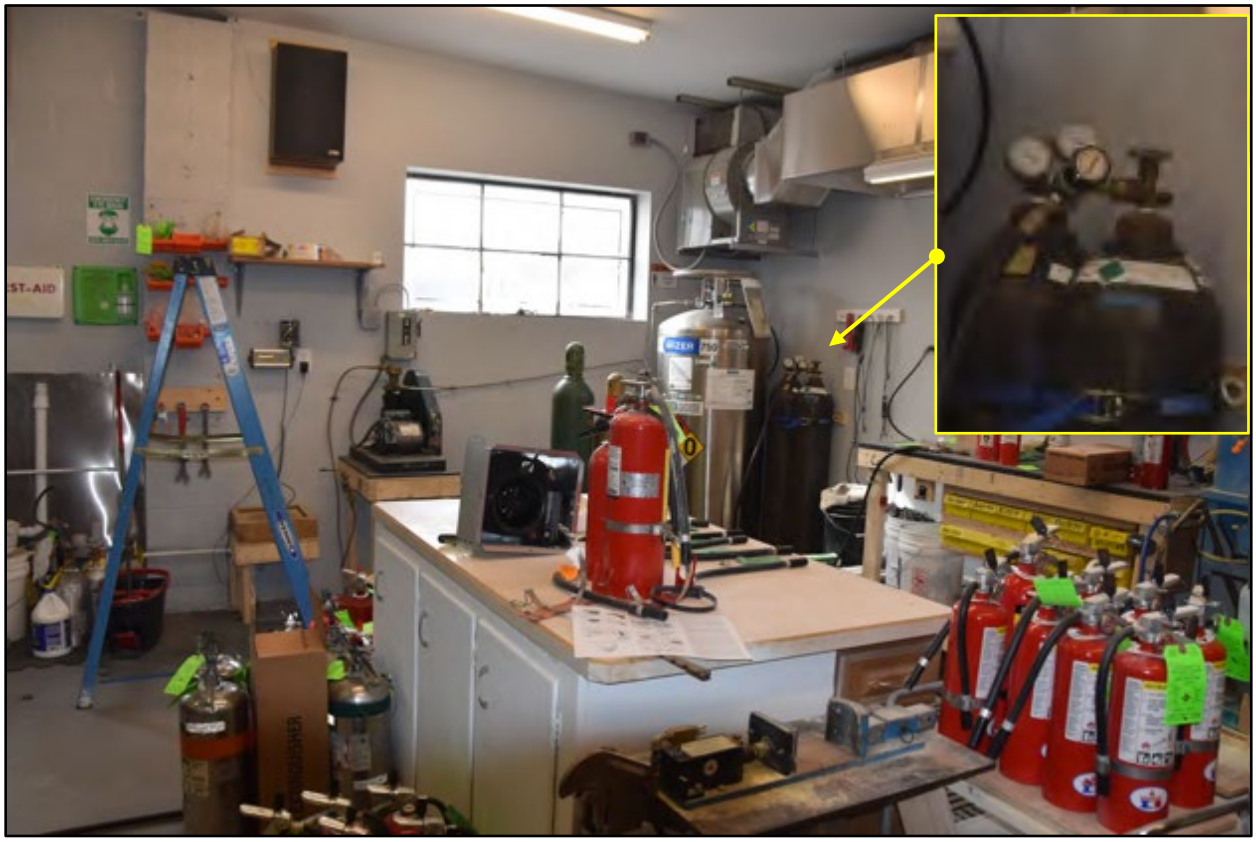

Figure 6. A nitrogen tank with a regulator. See inset photo. From the photos it is difficult to conclusively determine if the regulator is single or two stage (Source - police photos).

Figure 7. Photograph of the regulator on the back of the Poseidon system that is hooked up to the yellow air tanks. Both gauges go from 0 to 6000 psi, which could indicate that this is a single stage regulator. (Source – police photos).

The Poseidon air compressor and the cascade system are specifically designed systems that include air purification filters so that the air is breathable quality air and was used to fill SCBA tank cylinders, which are high pressure (over 3000 psi). Because of the high-pressures that it can generate on the outlet of the regulator, the cascade system is not a safe system to be used for

filling low-pressure cylinders, such as the one on the test tank cylinder. A relatively inexpensive air compressor at a fraction of the cost of the Poseidon cascade system capable of generating up to 250 psi could have been used. It would have eliminated the hazard of over pressurizing the low-pressure test cylinders that Oprandy's was using for balloon testing. It would also eliminate the human error hazard of setting a regulator pressure above the burst pressure of the test tanks. Mr. Scotts decision to use the high-pressure Poseidon system for low pressure tanks was an inappropriate and dangerous use of a system, like using a fire hose for gardening. It could certainly do the job, but it provided hazardous level of energy to an otherwise relatively low-energy system to cause serious harm.

On page 168 of his deposition, Mr. Scott testified that 4500 psi was the highest pressure the yellow cascade tanks would hold. The pressure needed for filling of SCBA tanks created a potential hazard on the regulator being set by the operator above the bursts pressure of the low-pressure test tanks. The regulator on the Poseidon system enables the operator to set the outlet pressure to at or above 4500 psi. See *Figure 6* which is from a police photo taken after the incident. Given that Mr. Scott was certified and familiar with the systems in his business, he was the most qualified individual to assess the hazards of a particular task that he assigned to his employees. When training his employees in his own business, it was his duty under OSHA to identify hazards, particularly on equipment that he was already trained on, and to develop systems and procedures that would protect his employees from being exposed to such hazards (general duty clause). Had he considered the difference between high-pressure and low-pressure systems, regulator functions and settings including outlet pressures involved, combined with his knowledge in both high and low pressure tank cylinder systems and his certifications in the industry, he could have easily incorporated that knowledge and experience into developing low pressure test tank cylinder filling system with written procedures and facility sign system warning compliant with ANSI standards.[1] This hazard identification is a part of the widely recognized job safety or task safety analysis tools (National Safety Council Accident Prevention Manual for Business and Industry) that would have identified the potential of over pressurization hazards in his system and enabled him to introduce mitigation measures that would have either eliminated, guarded or otherwise protected him and his employees from such hazards. Even common-sense modest hazard-prevention measures—which *every* employer is expected to implement—would have prevented the incident at issue.

Based on his testimony, it is clear that Mr. Scott should have recognized the potential for an over pressurization hazard when using the Poseidon cascade tanks as a compressed air source for low-pressure tanks. He should have recognized the significantly increased danger and consequences of human error of using the cascade system instead of using properly regulated filling system or air supplied from a low-pressure air compressor.

Mr. Scott did not provide the manuals for the Poseidon system to his employees and did not use the manuals to assess the potential hazards of working with the systems. He did not use the

[1] Based on the deposition testimony, Mr. Scott was under the impression that both the regulators on the cascade system and the nitrogen supply worked the same way. He did not produce any information on make and model of the reportedly two-stage regulators used in his shop and testified that he provided OSHA with the Poseidon system manual and did not keep a copy. I contacted the manufacturer of the system to obtain the manuals that were available and reportedly in possession of Oprandy's at the time of the incident. As of the writing of this report, no response from the Manufacturer has been received.

manuals to evaluate or to design a system for filling test tanks that would be free of recognized hazards. Hazard mitigation systems were readily available, if he chose to go through the process to identify the hazards of the system that he rigged and used to fill the test tank cylinders. Mr. Scott could have eliminated the over pressurization hazard by not using the Poseidon cascade system and using an air compressor or incorporating a pressure relief valve system of appropriate size and flow for the filling system that he used. An inexpensive appropriately sized pressure gauge just past the ball valve in his tank connection rig would enable the operator to monitor the amount of pressure going into the tank. The operators would not have to rely on reading the tank valve gauge that may be compromised and listening for the hiss of air to determine if the air was flowing. All of these measures, which are common sense, and both logistically easy and inexpensive, are basic industry standards. Manufacturers—just like employees, the government, and consumers—reasonably expect that employers will follow basic industry standards.

On page 137 of his deposition, Mr. Scott described that the test tank being filled could have been placed in steel chambers. The chambers are depicted in the photos in front of the Poseidon system in Figure 7. The fact that Mr. Foust did not follow this procedure demonstrates common deficiencies of relying exclusively on a “on the job training system” where Mr. Foust developed his own system of procedures that were even more dangerous than the ones developed and used by Mr. Scott. If Mr. Scott decided to use the Poseidon Cascade to fill low-pressure test tanks in lieu of less dangerous systems, Mr. Scott should have written instruction/procedures available to his employees and/or posted at the Poseidon system and also have facility warning signs informing and reminding the employees of the hazards, including instructions on how to avoid them. A clearly communicated and documented procedure of placing the test tank into one of the chambers in front of the cascade systems before they are pressurized, would have reduced (if not eliminated) the explosion hazard by containing and redirecting the explosion upwards and away from the limbs of the workers who were located in the horizontal plane from the floor. Having a protective enclosure between the tank and the employees would have further reduced the risk to employees during pressurization of the tank. Placing the tanks into the available chambers would have also provided direct view of the supply pressure gauges of the Poseidon system while the test tank was being filled. If an employer uses a high-pressure filling system like the Cascade system, it is common sense and industry standard for the employer to implement appropriate safeguards, including use of a steel chamber, to avoid the very incident that occurred at Oprandy’s. All parties—employers, the government, consumers, and manufacturers—rely on employers to implement such safeguards.

Figure 7. Poseidon cascade system safety chambers that should have been utilized when filling the air tank.

Mr. Scott used a rigged-up system of hoses, quick disconnects and a ball valve between the supply tank cylinder of the cascade system and the test tank cylinder to control air flow from the regulator to the test tank. On page 86 of his deposition, Mr. Scott testified that he had the same set up for the nitrogen system for recharging the fire extinguisher tanks. This was done so that the person filling the tank would not have to control flow from the supply regulator. One of the potential hazards associated with that system is that the operator may fail to recognize the potential difference in the regulator systems for a nitrogen tanks and Poseidon cascade tank system which can result in the regulator to be set to the wrong pressure and the tank can be over pressurized.

On page 143 of his deposition, Mr. Scott testified that to set the regulator, you use the working pressure of the tank. He testified that you obtain that pressure from the gauge on the tank valve. This is potentially dangerous for two reasons. The first reason that this is potentially dangerous is because tanks can be sold separately from the valves. It is feasible to have a tank fitted with the wrong valve or wrong gauge where the pressure on the valve gauge is not the working pressure of the tank. The proper way to check for the working pressure of a tank is to check the working pressure stamped on the tank. Page 192 of Mr. Scott's deposition testimony indicates that he was not aware of the meaning of the DOT tank stamp referring to operating pressure of the tank and the information was not included in his training of Mr. Foust. The second reason why this is potentially dangerous is that the valve gauge may be compromised and not functioning properly. On page 177 of his deposition, Mr. Scott testified that at one point, the tank that he was recharging with nitrogen showed no gauge reading, even though he had 225 psi preset on the regulator. If this occurred on the Poseidon cascade system that was set to above burst pressure of the tank, the tank would have exploded.

On page 200 of his deposition, Mr. Scott testified that *in all of his experience and training he never forecasted anything (meaning tank explosion) to ever happen. You never expect the worst.* This is contrary to the basic premise of safety methods of identifying hazards. In the process of job safety analysis (NSI), it is necessary to imagine the worst-case scenario, identify the hazards and then come up with ways to eliminate, guard and warn against the hazards. By not expecting the worst, Mr. Scott failed to identify recognized hazards of over pressurizing tanks and did not protect himself and his employees from such hazards. His own admission to the tank gauge not reading

the pressure supplied indicates that he had notice that tank gauges were not reliable and over with his system of relying on those gauges the event of overpressure was not a case of if it can happen rather when it will happen.

Mr. Faust and Mr. Buono were filling the air tank and fell into a human factors trap. They were not provided with and did not use the proper procedure. They were filling the tank on the floor without placing it into a protective chamber and they were far away from the supply side two-stage regulator to monitor the pressure. They did not have a filling system that would protect the test tank cylinder from being over pressurized. A safer system could easily and inexpensively have been accomplished by incorporating a pressure release valve and a calibrated gauge past the ball valve of the filling system to enable the operators to see the pressure rise without having to rely on listening for the air flow or test tank valve gauge that could become compromised.

Occupational Safety Aspects of this Incident

Business owners/operators have many resources that can assist them in developing sound safety systems in a workplace that can range from very general to very specific. National Safety Council (NSC) has published many tools that can be used to educate supervisors and employees. The tools can be used to develop systems and procedures that meet and exceed the minimum requirements set forth in OSHA and related federal regulations (CFR) as well as other industry consensus safety standard such as National Fire Protection association (NFPA); Compressed Gas Association (CGA). United Laboratories (UL) and American Society of Mechanical Engineers (ASME).

The NSC Accident Prevention Manual for Business & Industry: Administration & Programs (14th and earlier editions) have been used by people charged with the safety of organizations for decades. At Oprandy's, Mr. Scott had the obligation under OSHA General Duty Clause to furnish a place of employment that is free from recognized hazards which are causing or are likely to cause death or serious physical harm to employees. The accident prevention manual states:

General-Duty Clause

In many cases, there are specific regulations that govern different workplace activities. For those cases in which there are no specific regulations, there is Section 5(a)(l) of the OSH Act, often referred to as the general-duty clause. The general-duty clause requires employers to "furnish a place of employment that is free from recognized hazards which are causing or are likely to cause death or serious physical harm to employees."

When OSHA inspectors identify hazards that are not covered by other regulations, the inspectors use the general-duty clause to cite employers. However, for inspectors to be able to use the general-duty clause, the identified hazard needs to meet several criteria:

- *There is no applicable OSHA standard for the identified hazard.*
- *The employer failed to keep the workplace free of a hazard to which employees were exposed.*
- *The hazard was recognized or should have been recognized:*

- *The employer knew about the hazard, as shown by written or oral statements made during or before an OSHA inspection.*
- *The hazard is recognized by others in the same industry. Common sense indicates that any reasonable person would recognize the hazard.*

- *The hazard was causing or was likely to cause death or serious physical harm.*
- *There was a feasible and effective method to correct the hazard.*

A general-duty citation must involve both the presence of a serious hazard and exposure of the cited employer's own employees.

The accident prevention manual and other available publications discuss the use of the safety hierarchy to identify and evaluate hazards in the workplace. Once the hazards are identified they should be eliminated, guarded against or warned against.

In this incident, Mr. Scott could have eliminated the hazard by using an air supply system that did not dangerously exceed the working pressure of the air tank cylinders. He could have guarded against the hazard by including a pressure relief valve in his test tank cylinder filling system. He could have mitigated the hazard by having a written procedure and facility signs that required the employees to use steel chambers when filling the air tank, and he could have warned against the hazard by having appropriate training materials, facility warning signs and by training employees how to recognize hazards and to follow safety procedures and warnings in the work place. All of these measures are common sense, inexpensive, feasible, and industry standard among businesses that fill low-pressure tanks.

Findings and Opinions

Based on the above-described investigation and to a reasonable degree of scientific probability, I offer the following findings and opinions. As additional information becomes available or the scope of ESi's involvement is expanded, we will review and provide additional technical input as may be appropriate at that time.

1. The subject test tank met applicable DOT standards as a commercial product. Oprandy's had an obligation under OSHA to select appropriate component accessories including safety devices, procedures, training, and warning signs that would eliminate or mitigate the hazards of the intended use of the tank.

2. The air test tank cylinder filling system in place at Oprandy's was unreasonably dangerous and exposed employees to obvious explosion hazard by over pressurization.

3. The use of a high-pressure Poseidon cascade system, designed for filling high pressure SCBA cylinders, was obviously inappropriate and unreasonably dangerous as a system component for filling low-pressure test tank cylinders.

4. Oprandy's failed to utilize a safer air supply system for the low-pressure test tank cylinders and safety devices within the components of the test tank cylinder filling system that would eliminate tank over pressurization and explosion hazards.

5. Oprandy's failed to have a calibrated inline gauge past the ball valve that would have monitored the pressure going into the tank, without the employees having to rely on tank valve gauge and sound of air flow to determine if the tank was being pressurized.

6. Oprandy's did not require the employees, through any written procedures, training materials, or manuals, to use guarding such as the steel chambers to mitigate the potential for injuries if a tank exploded.

7. Oprandy's did not train employees to recognize the explosion hazards and how to mitigate the hazards.

8. Oprandy's did not employ facility warning signs to warn the employees against the specific hazards associated with the systems and procedures used to fill test tank cylinders including over pressurization of low-pressure test tank cylinders using the high-pressure Poseidon system as a supply.

9. The above safety precautions are commonsense, basic industry standard, relatively inexpensive, and feasible to implement. Failing to implement these procedures created a serious risk of explosion that was entirely unforeseeable to the product manufacturer.

I reserve any right I have to amend or supplement my opinions. If asked, I will be able to provide a tutorial of the concepts and terms related to this report. I may rely on demonstrative exhibits in presenting my testimony.

Respectfully Submitted,

Zdenek Hejzlar, Ph.D., CSP

Attachments:

A - File Inventory
B - Reference Literature
C - CVs, Testimony List

ATTACHMENT A

63235F
Buono v Tyco Fire
11/18/2019

Log #	Description
1	Verified Complaint
2	Citation and Notification of Penalty from Department of Labor
3	Evaluation of Ruptured Fire Suppression Tank from US Department of Labor
4	Amended Complaint
5	Tyco Fire Products LP's Answer to Amended Complaint and Cross-Claims
6	Rule 26 (a)(1) Disclosure
7	DF Tyco Fire Products LP's Initial Disclosures
8	DF Worthington Industries, Inc. Rule 26(a)(1) Initial Disclosures
9	PL's Response to DF's Request to Produce
10	DF Tyco Fire Products LP's Response to PL's 1st Set of Interrogatories
11	DF Tyco Fire Products LP's Response to PL's Demand for Expert Information
12	DF Tyco Fire Products LP's Response to PL's Request to Produce
13	DF Tyco Fire Products LP's Response to PL's Request For Admissions
14	DF Tyco Fire Products LP's Response to PL's Request to Produce Documents
15	DF Tyco Fire Products LP's Supplemental Response to PL's Request to Produce Documents
16	Worthington Industries, Inc's Response to Tyco Fire Products LP's Request for Production of Documents
17	Deposition of Franklin Buono, dated 04/30/18
17a	a. Depo Exhs
17b	b. Video Deposition
18	Deposition of Brian Scott, dated 05/02/2018
18a	a. Depo Exhs
18b	b. Video Deposition
19	
20	Deposition of Franklin Buono, dated 07/23/19
20a	a. Depo Exhs
21	Tyco Fire Products LP's Production Documents - Kitchen Knight Tech
22	Tyco Fire Products LP's Production Documents - Kitchen Knight II Tech Manual (TFP-280809-000061 - TFP-280809-000113)

23	Tyco Fire Products LP's Production Documents - Photos of the Scene, dated 2/12/16 (TFP-280809-000114 - TFP-280809-000231)
24	Tyco Fire Products LP's Production Documents - Drawings (TFP-
25	Tyco Fire Products LP's Production Documents - OSHA Report, dated 02/16/16 (TFP-280809-001122 - TFP-280809-001340)
26	Tyco Fire Products LP's Production Documents - Town of Wallkill Police Report, dated 2/12/16 (TFP-280809-001341 - TFP-280809-001345)
27	Tyco Fire Products LP's Production Documents - FOIA Records (TFP-280809-001346 - TFP-280809-001358)
28	Tyco Fire Products LP's Production Documents - State of NY Police Recrods (TFP-280809-001359 - TFP-280809-001370)
29	Various Medical Records
30	Videos - Exam, Pressure Testing Incident Regulator, Incident
31	Photographs of Scene from D & I
32	Workers Comp Ledgers
33	Poseidon Air Systems Product Info
34	2000 KK Price List
35	KK Introduction Bulletin - 10/26/01
36	Pyro-Chem Intro to New KK II System Bulletin- 11/11/01
37	OSHA File
38	Mechanicstown Fire Depratment Report
39	NY State Police Incident Report
40	Silver Lake Fire Dept. Report
41	Wallkill, NY Incident Report
42	Oprandy's Photographs by Patti Scott
43	Poseidon Air Systems Invoices
44	Bauer Posidon PSI Manual
45	Posiedon Air Sysmtems Other Product Info
46	Pyro-Chem Tech Manual
47	Deposition of Dana Blakely, dated 4/18/18
47a	a. Depo Exhs
48	Deposition of James Getter, dated 07/30/18
49	DF Tyco Fire Products LP's 1st Set of Requests for Production of
50	DF Tyco Fire Products LP's Rule 26(a)(1) Disclosures
51	PL's 1st Set of Interrogatories
52	Oprandy's Document Production
53	Buono's Document Production
54	PL's Demand for Expert Information
55	PL's Request to Produce
56	DF Tyco Fire Products LP's Response to PLs 1st Ste of Interrogatories

57	DF Tyco Fire Products LP's Request for Production of Documents to Worthington Industries, Inc.
58	Collateral Source Demand - Jury Demanded
59	DF Tyco Fire Products LP's Request for Production of Documents to
60	Tyco Fire Products LP's 1st Set of Interrogatories to PL
61	DF Tyco Fire Products LP's Response to PL's Demand for Discovery
62	PLs' Response to DFs' Interrogatories
63	Tyco Fire Products LP's Request for Production of Documents to
64	PLs' Supplemental Response to DFs' Interrogatories
65	Tyco Fire Products LP's Supplemental Rule 26 (a)(1) Disclosures
66	Supoena to Produce Documents, Information or Pbjects to Pamela
67	Oprandy's Fire & Safety Inc.'s Response to PL's Request for Production of Documents
68	Oprandy's Fire & Safety Inc.'s Response to Tyco Fire Products LP's Request for Production of Documents
69	Tyco Fire Products LP's Answers to 3-Party DF Oprandy's Fire & Safety Inc.'s 1st Set of Interrogatories to Tyco Fire Products LP
70	PL's Response to Demand for Expert Information
71	Poseidons Documents (POSEIDON-000001 - POSEIDON-000014)
72	Tyco Fire Products LP's Responses to 3-Party DF Oprandy's Fire & Safety Inc.'s 1st Notice to Produce
73	Worthington's Production (WORTH00001-00008)
74	Worthington's Notice of Removal of Action
75	Worthington's Answer to Buono Complaint
76	DF Tyco Fire Products LP's Answer to Complaint
77	DF Tyco Fire Products LP's Corporate Disclosure
78	DF Tyco Fire Products LP's Jury Demand
79	DF Tyco Fire Products LP's Reply to Worthington's Industries Inc.'s Cross-Claims
80	Answer to Complaint
81	Answer to Cross-Claim of Tyco Fire Products, LP
82	Answer to Cross-Claim of DF Worthington Industries
83	Rule 7.1 Corporate Disclosure Statement
84	Tyco Fire Products LP's Reply to Dana A. Blakely, LLC dba Poseidon
85	3rd Party Complaint
86	Answer to 3rd-Party Complaitn with Counter-Claims
87	Photographs from Brad James
88	Photographs from E. Christiansen
89	Photographs from Stephen Hill
90	Deposition of Curtis Harding, dated 09/12/19
91	Deposition of Adam Menor, dated 09/12/19
92	Deposition of Patricia Scott, dated 09/18/19, Vol I & II

92a	a. Depo Exhs
93	Response Package, 09/27/19

ATTACHMENT B

Kitchen Knight II: Restaurant Fire Supression System - PCL-300/460/600	Pyro-Chem Techinical Manual October 1, 2001
General Environmental Controls - Specifications for Accident Prevention Signs and Tags	Occupational Safety and Health Standards
Administration Programs - Legal and Regulatory Issues for the Safety Manager	National Safety Council - 14th Edition
Matheson - The Gas Professionals: Empty Cylinders	
Air Liquide Creative Oxygen - High Pressure Cylinders	
Kitchen Knight II: Restaurant Fire Supression System - PCL-240/350/550	Pyro-Chem Techinical Manual
The Harris Products Group - Two-Stage Regulators	
Overpressure Protection of Pressure Vessels	The National Board of Boiler and Pressure Vessel Inspectors Joseph F. Ball, P.E. October 3, 2018
High Pressure Breathing Air Compressors Operators Manual	Bauer Kompressoren January 2005
Poseidon Edition - Compressors for Sports & Safety Applications	Bauer Kompressoren
Poseidon Air Systems - High Pressure Full Stations - Model PTE-1	
Poseidon Air Systems - High Pressure Compressors - Model PFU-150	

ATTACHMENT C

12750 Commonwealth Drive
Ft. Myers, FL 33913

ZDENEK (ZED) HEJZLAR, Ph.D., CSP
SENIOR MANAGING CONSULTANT

wesystems@engsys.com

Dr. Hejzlar is a Senior Managing Consultant with ESi, with over 28 years of experience in premises/occupational safety and various aspects of the environmental and toxic health fields. He directs multidisciplinary projects in human factors' systems safety and accident reconstruction related to a broad range of environmental and industrial issues, chemical and hazardous material dangers, risk assessment, fire/explosion, slip, trip, and fall, premises/occupational safety and health hazards. He also has extensive experience in textile and other polymeric material failure analysis and design applications. In addition to the litigation related projects, Dr. Hejzlar is involved in accident prevention consulting research in slip resistant shoe design and risk mitigation consulting with major cruise lines and resorts.

Areas of Specialization

Industrial and Premises Safety
Environmental and System Safety Consulting
Textile and Polymeric Material Failures
Chemical and Physical Hazard Investigations
Fire/Explosion
Chemical Risk Analysis

Education

Ph.D., Occupational Safety and Health Engineering. Columbia Southern University, 1999
M.S., Business Administration. University of South Florida, 1990
B.S., Textile Chemistry. Philadelphia College of Textiles and Science, 1980

Certifications

Certified Safety Professional (CSP) #13230, Board of Certified Safety Professionals
X-ray Florescence Registration, Florida JR 44809000
Certified Walkway Auditor Safety Specialist WACH (Walkway Auditor Certificate Holder), ANSI/NFSI
Certified Mold Assessor, Florida Department of Business Regulation MRSA 329

March 2019

Appointments and Professional Affiliations

Dr. Hejzlar taught technical professional courses in environmental and safety risk management, property condition assessments and occupational safety and health. Projects include deployment, health and safety, risk evaluations, training and standards development for the U.S. Department of Defense, property evaluations for the U.S. Department of Agriculture, Technical Professional Training for ASTM, RIFS and HAZWOPER training for clients in Asia, and environmental risk training for World Bank Group members in Europe. Dr. Hejzlar has also been appointed and served as panel expert for the Transportation Research Safety Board. In addition to numerous technical papers on accident investigation, ASTM has published his three editions of technical manual on the Phase I and Phase II process and CD-ROM computer based assessment training. He served for over 10 years including chairmanship on the Committee for Publications for ASTM International overseeing publications of ASTM's industry technical journals. Dr. Hejzlar is involved in standards development related to safety of walkways surfaces and in tribometry research. He is an NFSI Certified Walkway Auditor Safety Specialist and ANSI/NFSI Walkway Auditor Certificate Holder. He chairs the ANSI/NFSI B101.9 Subcommittee developing standard for "Identification and Elimination of Interior and Exterior Trip Hazards on Walking Surfaces, Stairs, and Ramps."

American Chemical Society (ACS)

Member, 1993 – 2015

The American Institute of Chemists (AIC)

Certified Chemical Engineer (CChE), National Certification Commission in Chemistry and Chemical Engineering, 1993 – 2005

Certified Professional Chemist (CPC), National Certification Commission in Chemistry and Chemical Engineering, 1993 – 2005

American National Standards Institute (ANSI)

ANSI/NFSI Standards Committee B101 on Safety Requirements for Slip, Trip and Fall Prevention, Member, 2013 – present

ANSI/NFSI B101.4 Test Method for Measuring the Wet Barefoot Condition of Flooring Materials or Products, Member, 2014 – present

ANSI/NFSI B101.7 Standard Test Method for Lab Measurement of Footwear Outsole Material Slip Resistance, Member, 2014 – present

ANSI/NFSI B101.9 Identification and Elimination of Interior and Exterior Trip Hazards on Level and Un-Level Walking Surfaces, Stairs, Steps and Ramps, Chairman, 2014 – present

American Railway Engineering and Maintenance-of-Way Association

Member Committee 13 – Environmental, 2007 – 2012

American Society of Safety Engineers (ASSE)

Professional Member

American Society for Testing and Materials (ASTM)

Committee C11 on Gypsum and Related Building Materials and Systems
Subcommittee C11.01 on Specifications and Test Methods for Gypsum Products

Committee F13 on Pedestrian / Walkway Safety and Footwear

Committee E30 on Forensic Sciences
Committee E34 on Occupational Health and Safety
Committee E35 on Pesticides and Alternative Control Agents
Sub Committee E35.26 Safety to Man, Chair 2007 – 2009
Committee C15 on Manufactured Masonry Units
Committee F15 on Consumer Products
Committee E50 on Environmental Assessment, Risk Management and Corrective Action
Data Collection Requirements for Military Deployments
Task Force Chairman, 2004 – 2009
Environmental Health Site Assessment for Military Developments Standard
Development Task Force Chairman, 2001 – 2003
Environmental Assessment Phase II Training Development
Task Group Chair, 1998 – 1999
Environmental Assessment Phase I Training Development
Task Group Member, 1993 – present
Committee on Publications - Appointed Member, 2005 – 2010
Vice Chair, 2010 – 2013
Chairman, 2014 – 2017

City of Fort Myers Brownfields Advisory Board

Vice Chairman / Member, appointment by the Mayor and the City Council, 2001 – 2005

Florida Department of Financial Services

Education Section CE – 2-20, General Lines Property Casualty Approved Instructor, 2007 – 2009

The National Academies

Advisers to the Nation on Science, Engineering and Medicine, Transportation Research Safety Board, Cooperative Research Programs Advisory Expert on Project Panel HM-06, 2007 – 2010

National Association of Fire Investigators

Member, Certified Tire and Explosion Investigator (CFEI), 2009-2019

National Floor Safety Institute (NFSI)

Certified Walkway Auditor Safety Specialist
Member, 2013 – present

Texas Region IV

Region IV Texas Mold Licensing Training Development, Task Group for Assessors and Remediation Professionals Contributing Member, 2003 – 2004
Texas House Bill 329 / Texas Department of Health / Texas Mold Rules and Regulations Task Group Contributing Member on behalf of Texas Region IV School District, 2003

U.S. DOD/ASTM

Task Group Leader on Military Deployment Assessment Standards, ASTM/DOD, 2002 – 2009

Positions Held

Engineering Systems Inc., Fort Myers, Florida

Senior Managing Consultant, 2010 – present
Senior Consultant, 2005 – 2009
Director of Environmental Programs, 2001 – 2005

K.C. Breen & Associates, Inc., Fort Myers, Florida

Director of Environmental Management, 1993 – 2001
Director of Research, 1990 – 2001

Parker Seal/Parker Hannifin, Naples, Florida

Quality Assurance and Engineering Manager, 1986 – 1990
Quality Assurance Manager, 1984 – 1986

Madison Bay Marina Campground & Restaurant, Madison, Maryland

Owner Operator / Consultant, 1982 – 1984

Polymer Corporation, Reading, Pennsylvania

Engineering Specialist, 1980 – 1982

Scholler Brothers, Inc., Philadelphia, Pennsylvania

Research Laboratory Chemist, 1979 – 1980

Scottish College of Textiles, Galashiels, Scotland

Laboratory Chemist Trainee, 1976 –- 1977

BASF, Ludwigshafen, West Germany

Laboratory Technician, 1976

S.A. Fine Worsteds Co., Capetown, South Africa

Finishing Foreman, 1974 – 1975

Continued Education

CMA - NORMI® Certified Mold Assessor for FL Mold License Requirements
Estero, Florida, July 2016

Walkway Auditor Certificate Holder (WACH) Course Assessment, National Floor Safety Institute (NFSI)
Southlake, Texas, February 2015

Premises Safety Training - Slip, Trip, and Fall, Engineering Systems, Inc.
Ft. Myers, Florida, June 2014

Computer Fire Modeling, National Association of Fire Investigators
Sarasota, Florida, August 2013

Walkway Auditor Safety Specialist Certification Training, National Floor Safety Institute
Southlake, Texas, February 2013

Field Service and Maintenance Marathon Training School on RAMJET Compactors and Vertical Bailers
Vernon, Alabama, May 2011

Thermo Fisher Scientific Niton XRF Analyzer Operational Training Course, Thermo Fisher
July 2009, Florida Certificate Number 11:250038000000 eXD8a

National Fire, Arson & Explosion Investigation Training Program
National Association of Fire Investigators, National Fire Protection Association
Denver, Colorado, Spring 2009

Pedestrian / Bicycle Crash Investigations, IPTM, University of North Florida
Jacksonville, Florida, Summer 2006

Residential Inspection Seminar
Houston, Texas, Winter 2005

MycoMeter Mold Assessment and Testing and Training Course
Ft. Myers, Florida, Spring 2004

Mold: Effective Defense Strategies Seminar
Houston, Texas, Spring 2003

Hazardous Substances Workshop and Bioterrorism Training
Tampa, Florida, Spring 2003

40 Hour Hazardous Waste Operations and Emergency Response Course
Tampa, Florida, Winter 2000

Publications / Presentations

“Carbon Monoxide Poisoning,” Brochure for U.S. Coast Guard, © 2017 National Marine Manufacturers Association - Development Peer Review

“Reducing the Risk of Slip and Fall Accidents on Cruise Ships,” Z. Hejzlar, speaker, presented at Slips, Trips, and Falls International Conference 2017, Toronto Rehabilitation Institute, June 2017

“Manual 43 Technical Aspects of Phase I / II Environmental Site Assessments, Third Edition,” Publisher ASTM, Library of Congress ISBN 978-0-8031-7043-8, April 2015

"3rd Annual Southwest Florida Brownfield Symposium," Florida Department of Environmental Protection, Z. Hejzlar - speaker, presented at Lee County Public Education Center, Ft. Myers, Florida, March 20, 2015

"Manual 73 Safety and Occupational Footwear," Z. Hejzlar as ASTM COP representative, ASTM, April 2014

"Evaluation of the Dynamics of Heel Contact in Flip-flop Sandals Under Dry and Wet Conditions," Z. Hejzlar, International Conference on Fall Prevention and Protection, Tokyo, Japan, October 2013

"Risk Assessment of Walkway Surfaces Using Dynamic and Static Coefficient of Friction Tribometers and Update on Slip Resistance Measurement Standards," Z. Hejzlar speaker, presented at American Society of Safety Engineers (ASSE), Ft. Myers, Florida, August 2013

"Evaluation of the Dynamics of Heel Contact in Flip-flop Sandals Under Dry and Wet Conditions in Heel Plant Portion of Gait Cycle Using High-Speed Video," Z. Hejzlar, ASTM International Committee of Publications Annual Meeting, September 2012

"Analyzing the Risk of Daily Life-Revisited for Consumer and Recreational Products," K. C. Breen, W. J. Fischer, Z. Hejzlar, International Legal Guide, Global Legal Group, May 2011

"Applications of X-Ray Fluorescence in Corrosive Drywall Investigations - The Use of X-Ray Fluorescence (XRF) in Detecting and Evaluating Sulfur Impacts on Exposed Copper," Z. Hejzlar, K. Klosinski, R. Granica, meeting on Materials Science & Technology 2010, symposium proceedings on Failure Analysis and Prevention Editor(s), MS&T Publications Department, October 2010

"Applications of X-Ray Fluorescence to Confirm Sulfur Impact of Corrosive Drywall," Z. Hejzlar, Journal of Testing and Evaluation, Vol. 39, No. 1, Paper ID JTE 103027, August 2010

"X-Ray Fluorescence in Corrosive Drywall Investigations: Strontium Levels in Several Corrosive and Non-Corrosive Drywalls and Effects of Drywall Finish on XRF Strontium Detection," Z. Hejzlar, Journal of Testing and Evaluation, Vol. 39, No. 1, Paper ID JTE 103087, July 2010

"Industry Update: Foreign Drywall," Z. Hejzlar speaker presentation Cape Coral Construction Industry Association Cape Coral, Florida, May 2010

"Materials Analysis - Portable X-Ray Fluorescence," Z. Hejzlar speaker presentation, Technical Symposium on Corrosive Imported Drywall, UF, USF, Hinckley Center and FL DOH, Tampa, Florida, November 2009

"Applications of Portable X-Ray Fluorescence in Problematic Drywall Investigations," Z. Hejzlar / Engineering Systems Inc., J. Pesce / Thermo Fisher Scientific, poster presentation, Technical Symposium on Corrosive Imported Drywall UF, USF, Hinckley Center and FL DOH, Tampa, Florida, November 2009

"Problematic Drywall Impacts in U.S. Residential Construction: Investigating Problematic Drywall Issues," Z. Hejzlar, J. McDougal, M. L. Hanks, M. Underwood, July 2009

"Science of Drywall," Z. Hejzlar, presented at Harris Martin Chinese Drywall Conference, Orlando, Florida, June 2009

"Technical Guide for the Collection of Environmental Sampling Data Related to Environmental Health Site Assessments for Military Deployments (NMCPHC TM-PM 6490.2 also USACHPPM as the TG-317)," Co-author FDPMU Program Science & Technology, Navy & Marine Corps Public Health Center

"Manual 43 Technical Aspects of Phase I / II Environmental Site Assessments, Second Edition" Publisher ASTM, Library of Congress ISBN 978-0-8031-4273-2, September 2007

"Use of ASTM Risk Based Corrective Action Standards with Innovative Management Approaches to Achieve Timely Site Closures," Railroad Environmental Conference, University of Illinois, Chicago, Illinois, October 2007

"Documentation and Preservation of Information in Claims Investigations Using the ASTM Standards," Catmando Inc. Tampa, Florida, February 2007

"Innovative Site Remediation Technologies Training Course," presented to Geo-Environmental Technology Research Center, Tokyo, Japan, April 2004

"Environmental Health Site Assessment Process for Military Deployments," ASTM Standard Guide E2318-03, Co-author

"Technical Aspects of Mold Investigations," presented to Nationwide Insurance, Plantation, Florida, March 2003

"Environmental Assessment - Train the Trainer," presented to Geo-Environmental Technology Research Center, Tokyo, Japan, January 2003

Department of Defense Deployment Assessment Training, various Military Installations in the U.S. and abroad, 2003 – 2009

40 Hour Hazwoper Training, presented to ECO Solutions, Seoul, Korea, April 2001

"Remedial Investigations Feasibility Study - EPA Methodology Applications in Asia," presented to ECO Solutions/ KARICO Poil-dong, Seoul, Korea, March 2001

"Training the Trainer - Applications of ASTM Standards," presented to ECO Solutions, Seoul, Korea, December 2000

"Computer Based Technical Course Developed for ASTM Environmental Site Assessments for Commercial Real Estate," ASTM, CD-ROM Format

"Solving Environmental Management Risk Issues for Clients in European Countries," presented to Zurich Insurance Company internal technical training, Zurich, Switzerland

"Environmental Aspects of Commercial Real Estate Transactions Management," presented to ARVIDA Realty Continuing Education, Bonita Springs, Florida, November 2000

"Solving Environmental and Brownfields Issues for Clients," presented to Professional Business Brokers Association, Ft. Myers, Florida, October 2000

"ASTM Standards in Products and Personal Injury Litigation," presented to Lee County Bar Association, Ft. Myers, Florida, March 2000

"Technical Aspects of Quick Response Assessments Course," presented to DEP Hazardous Materials Response Department, New York, New York, January 2000

"The Use of ASTM Standards in Forensic Investigations," The Chemist, 1999

"Manual 43 Technical Aspects of Phase I / II Environmental Site Assessments," publisher ASTM, Library of Congress ISBN 0-8031-2084-2, December 1999

"Human Factors of Slips and Falls," presented at Challenges Conference sponsored by the Florida Department of Health, Lee Memorial Health Systems and Florida Injury Prevention for Seniors, Ft. Myers, Florida, April 1998

"Developments in Alternate Marine Transportation," SAE 951892, Society of Automotive Engineers, Costa Mesa, California, August 1995

Phase I and Phase II Environmental Site Assessment Training Courses, ASTM Technical Professional Training system, various locations worldwide, 3-5 courses per year, 1994 – present

"Investigation and Analysis of Marine Accidents," SAE 930658, Society of Automotive Engineers, Detroit, Michigan, March 1993, Reprinted with permission by the Society of Accident Reconstructionist

"Operator and Environmental Factors Associated with Off-Road Equipment Risk," SAE 921711, Society of Automotive Engineers, Milwaukee, Wisconsin, September 1992

12750 Commonwealth Drive
Fort Myers, FL 33913

ZDENEK (ZED) HEJZLAR, Ph.D., CSP
SENIOR MANAGING CONSULTANT

wesystems@engsys.com

PROJECT	STATE	
2020		
DeCarlo v Naples Hotel Company No. 19-CA-000142 Circuit Court of the 12th Judicial Circuit, Collier County, FL	FL	(Deposition)
Valega v Premium Building Maintenance, et al. No. 2016-016038-CA-01 Circuit Court of the 11th Judicial Circuit, Miami-Dade, FL	FL	(Deposition)
Martinez v Carnival Cruise Lines No. 19-cv-22126-FAM United States District Court, Southern District, FL	FL	(Deposition)
2019		
Munoz v Carnival Cruise Lines No. 19-20044-CIV-COOKE/GOODMAN United States District Court, Southern District, FL	FL	(Deposition)
Boyett v Carnival Cruise Lines No. 18-CV-22047-ALTONAGA/Goodman United States District Court, Southern District, FL	FL	(Deposition)
Estate of Kemp v The Marina at Edison Ford No. 16-CA-004084 Circuit Court of the 20th Judicial Circuit, Lee County, FL	FL	(Deposition)
Holmes v Carnival Cruise Lines No. 18-cv-22735-COOKE/GOODMAN United States District Court, Southern District, FL	FL	(Deposition)
Palmer/Hernandez v CREC No. 2017-029922-CA-01 Circuit Court of the 11th Judicial Circuit, Miami-Dade, FL	FL	(Deposition)
Gurwood v GCA Service Group No. 2015-CP-10-2191 Court of Common Pleas 9th Judicial Circuit	SC	(Trial)
Filippini v Delray Marketplace No. 50-2016 CA 09847XXXXMBAE Circuit Court of the 15th Judicial Circuit, Palm Beach County, FL	FL	(Deposition)
2018		
Cohen v Target No. 9:18-CV-80587 United States District Court Southern District of Florida	FL	(Deposition)
House v Leggett & Platt, Inc. No.11MN-CV00015 Circuit Court of Monroe County, Paris MO	MO	(Deposition)
Gurwood v GCA Service Group, Inc. No. 2015-CP-10-2191 Court of Common Pleas 9th Judicial Circuit	SC	(Deposition)

Brown v Lee County Board of County Commissioners FL (Deposition)
No. 16-CA-3935
Circuit Court of the 20th Judicial Court, Lee County, FL

Lopes v The Grand Condominium FL (Deposition)
No. 2016-031501 CA 01
Circuit Court of the 11th Judicial Circuit, Miami-Dade County, Florida

Dial v Calusa Palms Master Association FL (Deposition & Trial)
No. 16-CA-1114
Circuit Court of the 20th Judicial Court, Lee County, Florida

Soriano v Leon Medical Centers, Inc. FL (Deposition)
No. 17-005080-CA--01
Circuit Court of the 11th Judicial Circuit, Miami-Dade County, Florida

Vail v Marriott FL (Trial)
No. 11-2016-CA-001702-0001-XX
Circuit Court of the 20th Judicial Circuit, Collier County, Florida

Rodriguez v Delta GA (Deposition)
No. 14EV000427B
State Court of Fulton County, State of Georgia

2017

Kenney v SeaWorld FL (Trial)
No. 2013-CA-005946
Circuit Court of the 13th Judicial Circuit, Hillsborough County, Florida

Perez v SeaWorld FL (Trial)
No. 2015CA3302
Circuit Court of the 9th Judicial Circuit, Orange County, Florida

Winters v Winn Dixie FL (Trial)
No. 12-19187 CA 09
Circuit Court of the 11th Judicial Circuit, Miami-Dade County, Florida

Marsh v Wal-Mart FL (Deposition)
No. 15-CA-002896
Circuit Court of the 20th Judicial Circuit, Lee County, Florida

Gardner v Target FL (Deposition)
No. 9:16-CV-80743-WIZ
Circuit Court of the 15th Judicial Circuit, Palm Beach County, Florida

McDonnell v RCCL FL (Deposition)
No. 16-22044 RNS
United States District Court; Southern District of Florida Miami Division

Perez v SeaWorld FL (Deposition)
No. 2015CA3302
Circuit Court of the 9th Judicial District; Orange County, Florida

McDonnell v RCCL FL (Deposition)
No. 16-22044 RNS
United States District Court; Southern District of Florida Miami Division

Gerdau Ameristeel US, Inc. v Davenport Electric Contract Co. FL (Pre-trial Hearing)
No. 8:14-CV-001647-001
United States District Court; Middle District of Florida Tampa Division

2016

Winters v Winn Dixie FL (Pre-trial Hearing)
No. 12-19187 CA 09
Circuit Court of the 11th Judicial Circuit, Miami-Dade County, Florida

Montesinos v Tire Kingdom FL (Deposition)
No. 16-000771 CA-01
Circuit Court of the 11th Judicial Circuit, Miami-Dade County, Florida

Aramark Sports v Twin Anchors Marine AZ (Deposition)
No. CV-14-08146-PCT-NVW
United States District Court; District of Arizon

Diaz v Kosch FL (Deposition)
No. 12-38485 CA 24
Circuit Court of the 11th Judicial Circuit, Miami-Dade County, Florida

Morton v Edison Mall FL (Deposition)
No. 15-CA-001129
Circuit Court of the 20th Judicial Circuit, Lee County, Florida

Barton v Golfview Motel, et al. FL (Deposition)
No. 2015-CA-001830
Circuit Court of the 20th Judicial Circuit, Lee County, Florida

Rodriguez v APTH Condominium FL (Deposition)
No. 14-27814 CA-05
Circuit Court of the 11th Judicial Circuit, Miami-Dade County, Florida

Gerdau Ameristeel US, Inc. v Davenport Electric Contract Co. FL (Deposition)
No. 8:14-CV-001647-001
United States District Court; Middle District of Florida Tampa Division

Bonelli v Indigo Lakes FL (Trial)
No. 13-CA-3133
Circuit Court of the 20th Judicial Circuit, Collier County, Florida

Mullins / Rhodes v G.S.I. Recycling, et al. FL (Trial)
No. 2012 CA 000664
Circuit Court of the 1st Judicial Circuit, Escambia County, Florida

Meta v Target OH (Deposition)
No. 4:14-CV-0832
United States District Court; Northern District Court of Ohio, Cleveland Division

Kaufer v Target FL (Trial)
No. 062010CA029778AXXXCE
Circuit Court of the 17th Judicial Circuit, Broward County, Florida

2015

Kaufer v Target FL (Deposition)
No. 062010CA029778AXXXCE
Circuit Court of the 17th Judicial Circuit, Broward County, Florida

Eddy v Waldorf Astoria Naples FL (Deposition)
No. 11-2013-CA-002130-0001
Circuit Court of the 20th Judicial Circuit, Collier County, Florida

Holton v Oakbrook Condominium Association FL (Deposition)
No. 14-001714-CI (15)
Circuit Court of the 6th Judicial Circuit, Pinellas County, Florida

Jackson v Lauderdale Marketplace FL (Trial)
No. 13-009376 CA 05
Circuit Court of the 17th Judicial Circuit, Broward County, Florida

Quintana v Winn Dixie FL (Deposition)
No. 09-87543 CA 22
Circuit Court of the 11th Judicial Circuit, Miami-Dade County, Florida

Bonelli v Indigo Lakes FL (Deposition)
No. 13-CA-3133
Circuit Court of the 20th Judicial Circuit, Collier County, Florida

Boylan v Progressive Auto Center FL (Deposition)
No. 14-CA-000286
Circuit Court of the 20th Judicial Circuit, Collier County, Florida

O'Connor v Ruehl FL (Depositions)
No. 10 020883
Circuit Court of the 13th Judicial Circuit, Hillsborough County, Florida

Maynard v Aldi TN (Deposition)
No. 2012-CV-583
Circuit Court for Wilson County, Tennessee at Lebanon

Pickard v Perrine Enterprises FL (Deposition)
No. 2013-CA-1089
Circuit Court of the 20th Judicial Circuit, Collier County, Florida

Jackson v Lauderdale Marketplace FL (Deposition)
No. 13-009376 CA 05
Circuit Court of the 17th Judicial Circuit, Broward County, Florida

Bruner v Wyvern FL (Deposition)
No. 12-2070-CA
Circuit Court of the 20th Judicial Circuit, Charlotte County, Florida

Petit v Omega Flex FL (Deposition)
No. 3:13cv618/MCR/EMT
United States District Court; Northern District of FL, Panama City Division

Elkins v Fort Myers Waterfront FL (Deposition)
No. 13-CA-001787
Circuit Court of the 20th Judicial Circuit, Lee County, Florida

Cleary v Lee County, Florida FL (Deposition)
No. 13-CA-2596
Circuit Court of the 20th Judicial Circuit, Lee County, Florida

Florida Rock & Tank Lines v Coomes FL (Trial)
No. CA12-0780
Circuit Court of the 7th Judicial Circuit, St. Johns County, Florida

Coulter v Publix FL (Deposition)
No. 11-2891-CA
Circuit Court of the 20th Judicial Circuit, Charlotte County, Florida

Florida Rock & Tank Lines v Coomes FL (Deposition)
No. CA12-0780
Circuit Court of the 7th Judicial Circuit, St. Johns County, Florida

TERMS AND CONDITIONS FOR PROFESSIONAL SERVICES

STANDARD OF CARE

ESi shall perform its services under its engagement with Client in a workmanlike manner, and in accordance with applicable industry and professional standards, using reasonable care and skill, consistent with that ordinarily exercised by members of the profession under similar circumstances, and in compliance with any applicable laws, rules, or regulations (hereinafter referred to as the "Performance Standard"). All professional findings and opinions offered by ESi personnel will be subjected to an internal quality review by another qualified ESi consultant. ESi makes no representation or warranty, express or implied, that its services will achieve a specific result.

Occasionally, an engagement will require ESi to provide design or engineering services that exceed the Performance Standard. The normal ESi consulting fee schedule does not apply in these circumstances. If the Client wishes ESi to assume any increased liability or responsibility beyond the Performance Standard, a separate written agreement which defines the responsibilities of the parties must be executed.

ESi's commitment to perform in accordance with the performance standard is the only warranty concerning the services and any deliverables and is made for the benefit of the client only and is in lieu of all other warranties and representations, express or implied.

The client shall indemnify and hold harmless ESi, its agents, employees, and consultants from and against all claims, damages, losses, and expenses arising out of or resulting from or in connection with the performance of work which meets the performance standard or which results in whole or in part from client's negligence or the negligence of client's agents.

NOTICE

The Client agrees to inform ESi promptly and in sufficient time to allow a timely response by ESi, of any court filing, motion, or ruling of any judicial, administrative or public body which may affect ESi, including but not limited to: Daubert motions, motions intended to limit the scope of testimony, and discovery requests that call for the dissemination of confidential ESi information.

The Client agrees to promptly notify ESi of all parties involved in an investigation or lawsuit, so that ESi can perform a comprehensive conflict check. If a material conflict of interest develops, or the Client breaches any requirements of professional conduct during the course of the project, ESi may, at its sole discretion, terminate work on the project immediately, by providing written notice to the Client

BILLING

Projects are billed monthly, with summary invoices that set forth fees and incurred expenses. ESi will only provide detailed invoices at the Client's request. ESi terms are 'Net 30' days from the invoice date. Any disputed charges must be brought to our attention within 30 days of the invoice date. All undisputed charges, on any invoice, shall be paid within the applicable 30-day period.

An administrative fee of 2% is assessed on professional service fees to cover the cost of routine copies, postage, local mileage (less than 50 miles), CDs, DVDs, external storage (less than 16GB), and any other single pass through expense with a cost of $25.00 or less. If any unpaid balance remains 60 days after the invoice date, ESi may charge interest at a rate of 1 1/2% per month on the unpaid amount. If payment is not received in a timely manner, ESi may, upon notice to the Client, suspend services under this agreement until all amounts due to ESi for services, expenses, and charges are paid in full. ESi also reserves the right to pursue all available collection efforts.

In general, ESi will charge for services on an hourly basis; however, in some cases, special billing such as flat fee or fixed price arrangements may apply, if agreed to by the Client and ESi. The Client may request a schedule of professional staff billing rates and a list of administrative and service fees applicable to a particular engagement. Please note that all rates are reviewed and adjusted on a yearly basis.

Travel is billed at cost, without mark-up or premium. Non-local travel by automobile will be charged at the prevailing IRS-approved rate. For professional staff, all travel time is billed at the full rate. Specific hourly or daily use rates will apply when highly specialized equipment or software is utilized during the course of the project. Any single project expense that exceeds $500.00 will be billed at cost plus 10%; however, the Client may avoid this markup by prepaying the expenses or obtaining such equipment, project supplies, or outside services independently. Depending on the nature of the assignment, ESi reserves the right to require an advance on expenses or a retainer fee.

From time to time, a project will require members of our technical staff to present the results of our findings in a written report, deposition, or court proceeding. In these cases, the project will be charged the standard applicable rates and associated costs. In some instances, a minimum charge may apply. If ESi is subpoenaed or asked to provide testimony on a project, the actual time and expenses associated with the preparation and testimony will be charged to the project. The Client is responsible for any fees and costs associated with services provided by ESi staff. After ESi has been paid in full, ESi will assist the Client in obtaining reimbursement from other parties, where appropriate.

ARTIFACTS RECEIVED BY ESi FOR EXAMINATION AND TESTING

ESi takes reasonable steps to protect artifacts, (e.g. materials, parts, equipment) from loss. However, it must be recognized that there is a degree of risk with even the best control system. ESi will identify and track artifacts in its possession to maintain control and traceability. Large items, which cannot be readily accommodated in the usual ESi storage areas, may be stored in another secured warehouse or fenced lot. The Client will be billed regularly for artifact handling and storage, both on and off ESi premises. A schedule of handling and storage fees is available upon request. All evidence is stored under the condition that the Client agrees to hold ESi harmless in the event of a loss. ESi's insurance policy covers the cost of replacement, and not the value that may be associated with research, litigation, or historical value. If the Client requires special handling or insurance protection, specific arrangements can be made upon written request to the Project Manager.

Upon completion of ESi's work on a project, to the extent ESi has not otherwise received instructions from the Client, ESi will send an Artifact Disposal Form to the Client via certified mail. An Artifact Disposal Form will also be sent to the Client if artifact storage fees are unpaid for a period of 60 or more days after invoicing. An executed copy of the Artifact Disposal Form must be received by ESi within 45 business days of receipt, and should advise ESi whether to dispose of or return the artifact(s). If no response is received within 45 business days, ESi may dispose of the artifact(s) in its sole discretion. The Client will be billed for technician time and expenses related to artifact delivery or disposal.

CONFIDENTIALITY AND WORK PRODUCT

It is ESi policy to keep the nature and scope of our client engagements confidential. ESi agrees to treat the Client's confidential information with the same degree of care that ESi accords its own confidential information, and in no case, less than reasonable care. The term "confidential information" shall be deemed to include all information not generally known to ESi's and Client's competitors and which they have taken reasonable steps to ensure such confidentiality.

All ESi work product is intended solely for use on behalf of the Client, and no other party may use ESi work product without ESi's express written consent. For the purpose of this document, ESi work product means all reports, laboratory test data, animations, visual work product, calculations, estimates, concepts, ideas, theories, notes, and other documents or information prepared and captured in any form or medium by ESi, its staff, consultants, and/or its affiliates in the course of providing engineering consulting services to the Client.

Upon notification of a project closing, ESi will return all protected or confidential documents to the Client and dispose of the remaining file materials. ESi will retain its work product.

WAIVER OF CONSEQUENTIAL DAMAGES

The Client and ESi mutually agree to waive all claims of consequential damages arising from disputes, claims, or other matters related to this engagement.

GENERAL

In the event any dispute arises, ESi and Client will negotiate in good faith to resolve such dispute prior to seeking relief in mediation. If the dispute has not been resolved by negotiation within 45 days after delivery of the initial notice of negotiation, the parties shall endeavor to settle the dispute by mediation under the then current CPR Mediation Procedure.

This engagement cannot be assigned without ESi's express prior written consent. No waiver of ESi's rights under any provision in these terms and conditions should be construed as a waiver of any other term or condition hereunder. Likewise, failure to immediately enforce a provision in these terms and conditions does not preclude ESi's right to enforce the provision at a later time.

This Agreement contains the entire agreement between the parties with respect to the subject matter of the Agreement and supersedes all prior agreements and understandings, both oral and written, between the parties with respect to the subject matter of the Agreement.

Any modifications to these terms and conditions shall be made in writing. In the absence of any such modifications, addenda, or other written agreements, these terms and conditions shall govern the actions of ESi and the Client with respect to this engagement.

Name: _____

Signature: _____

Organization: _____

Date: _____

12750 Commonwealth Drive
Ft. Myers, FL 33913

2020 FEE & EXPENSE SCHEDULE

PROFESSIONAL RATES *(Hourly)*

• Kevin C. Breen, Principal	$450
• Zdenek Hejzlar, Senior Managing Consultant	$400
• Kevin D. Bedsworth, Senior Managing Consultant	$270
• Mel A. Underwood, Senior Managing Consultant	$270
• Amy E. Gray, Senior Managing Consultant	$275
• Andrew W. Johnson, Senior Managing Consultant	$275
• Mike Hanks, Senior Consultant	$325
• Casey D. Breen, Senior Consultant	$270
• Aaron D. Miller, Senior Staff Consultant	$250
• Derrek G. Verlaan, Senior Staff Consultant	$210
• Steven Faupel, Senior Staff Consultant	$210
• Jennifer Odebralski, Staff Consultant	$210
• Johann Weekes, Staff Consultant	$210
• Neil Cichy, Staff Consultant	$200
• Jared McGillicuddy, Staff Consultant	$200
• Grant A. Wilcox, Staff Consultant	$200
• Ashley Solek, Staff Consultant	$185
• Alex McCulla, Staff Consultant	$180
• Katie Baron Zakutansky, Staff Consultant	$180
• Senior Project Analyst	$190
• Project Analyst	$95 - $160

EXPENSES

• Travel – airfare, hotel, meals, parking, rental car, depositions, etc.	Cost
• Mileage (Not billed for rental car use)	Prevailing IRS Rate
• Project related publications and special items (with client approval)	Cost
• Outsourced services – shipping, reproduction, etc.	Cost
• Single Direct Expense Purchases of $500 or more	Cost + 10%

ARTIFACT STORAGE (Quarterly)

ESi bills for quarterly artifact storage in advance

• Size 1 (approximate size of a shoebox)	$75
• Size 2 (approximate size of a tote bag)	$150
• Size 3 (approximate size of a pallet)	$500
• Custom Size (exceeding capacity of a pallet)	Case-by-Case Basis
• Artifact Return	Actual Packaging / Shipping Cost
• Artifact Disposal	Cost